



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

The Application of: Mark Dinsmore

Serial No.: 10/718,506 (which is a reissue application of 6,320,932, issued November 20, 2001)

Filed: November 20, 2003

Title: MINIATURE RADIATION SOURCE WITH FLEXIBLE PROBE AND LASER DRIVEN THERMIONIC Emitter

Attorney Ref.: 56249-140 (PHLL-132DVRE)

**CERTIFICATE OF MAILING (37 C.F.R. § 1.8(a))**

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail under 37 CFR 1.8(a) in an envelope addressed to Mail Stop Missing Parts, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date indicated below.

Date: 09-02-04

Elizabeth Kim  
Elizabeth Kim

Mail Stop Missing Parts  
Assistant Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**PETITION UNDER 37 CFR § 1.47(b)**

Sir:

In response to the Notice To File Missing Parts of February 2, 2004, petition is hereby made to accept the Declaration and Power of Attorney, which is enclosed herewith and is signed by Mark G. Lappin on behalf of and as an agent of the sole inventor of the above-identified reissue application, pursuant to the provisions of 37 C.F.R. § 1.47(b). The Notice To File Missing Parts of February 2, 2004 has a two (2) month shortened statutory period for response expiring April 2, 2004, and a Petition for five (5) month extension of time to respond to the Notice to File Missing Parts, up to and including September 2, 2004, is being filed concurrently herewith.

BST99 1423186-1.056249.0140

09/08/2004 MBELTE1 00000065 501133 10718506

09/08/2004 MBELTE1 00000065 10718506  
03 FC:1460 130.00 DA

**A. SOLE INVENTOR**

Mark Dinsmore is the sole inventor of the above-identified reissue application (“Reissue Application”). At the time Mark Dinsmore invented the subject matter of the Reissue Application (“Invention”), he was an employee of Photoelectron Corporation (“Photoelectron”).

**B. APPLICANT MAKES OATH**

In accordance with M.P.E.P. §409.03(b), the undersigned, Mark G. Lappin, hereby makes application for the Invention on behalf of and as agent for an inventor who refuses to sign the Declaration and Power of Attorney for the Reissue Application (“Application Papers”). Mark G. Lappin hereby states that he is authorized to sign on behalf of Carl Zeiss AG, the current assignee of the Reissue Application, in this matter for this purpose.

**C. APPLICANT'S RELATIONSHIP TO INVENTOR**

In accordance with M.P.E.P. § 409.03(b), applicant Mark G. Lappin is a registered patent attorney (Registration No. 26,618) in the Intellectual Property Department of McDermott Will & Emery LLP, acting on behalf of Carl Zeiss AG, who acquired the Reissue Application from Photoelectron. Photoelectron is the original assignee of Mark Dinsmore’s interest in the Reissue Application.

**D. INVENTOR REFUSED TO SIGN THE APPLICATION PAPERS**

In accordance with M.P.E.P. §409.03(d), 1) Mark Dinsmore refused to sign the Application Papers, despite having been asked to do so; and 2) Mark Dinsmore gave a

reason for refusing to sign the Application Papers, namely that he was concerned that signing the Application Papers might limit his future business activities.

**E. PROOF OF REFUSAL TO EXECUTE THE APPLICATION PAPERS**

In accordance with M.P.E.P. §409.03(d), Mark G. Lappin submits herewith a "Declaration in Support of a Petition Under 37 C.F.R. § 1.47(b)," which fully describes the facts that are relied upon to establish that Mark Dinsmore refused to sign the Application Papers.

**F. LAST KNOWN ADDRESS**

In accordance with M.P.E.P. §409.03(e), the last known address of Mark Dinsmore is: 85 Horse Pond Road, Sudbury, MA 01776.

**G. THE INVENTOR HAS ASSIGNED THE INVENTION TO CARL ZEISS AG**

In accordance with M.P.E.P. §409.03(f), the inventor Mark Dinsmore assigned the Reissue Application to Photoelectron, which in turn assigned the Reissue Application to Carl Zeiss AG. A copy of the relevant assignment documents ("Assignment Documents") are attached to this petition. The Assignment Documents establish a *prima facie* case that Carl Zeiss AG has a proprietary interest in the subject matter of the Reissue Application.

**H. FILING OF THE APPLICATION IS NECESSARY TO PRESERVE THE RIGHTS OF CARL ZEISS AG**

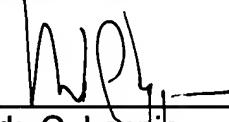
In accordance with M.P.E.P. §409.03(g), the refusal by Mark Dinsmore to sign the Application Papers fails to preserve Carl Zeiss AG's rights granted under the

Assignment Documents, and will result in irreparable damage by causing the abandonment of the Reissue Application for failure to comply with the statutory requirements of 37 C.F.R. §1.497. The filing of the Reissue Application is necessary to preserve the rights of Carl Zeiss AG.

I. **PETITION FEE**

The Commissioner is hereby authorized to charge the petition fee in accordance with 37 C.F.R. 1.117(i), as well as the petition fee for an extension of time under 37 C.F.R. § 1.136, to Deposit Account 50-1133. The Commissioner is hereby authorized to charge any additional fees that may be due, or credit any overpayment of same, to Deposit Account No. 50-1133.

Respectfully submitted,

  
\_\_\_\_\_  
Mark G. Lappin  
Registration Number 26,618  
McDERMOTT WILL & EMERY LLP  
28 State Street  
Boston, Massachusetts 02109  
Tel. (617) 535-4043  
Fax: (617) 535-3800

Date: September 2, 2004



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of: Mark Dinsmore

Serial No.: 10/718,506 (which is a reissue application of 6,320,932, issued November 20, 2001)

Filed: November 20, 2003

Title: MINIATURE RADIATION SOURCE WITH FLEXIBLE PROBE AND LASER DRIVEN THERMIONIC EMITTER

Attorney Ref.: 56249-140 (PHLL-132DVRE)

Mail Stop Missing Parts  
Assistant Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

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**CERTIFICATE OF MAILING (37 C.F.R. § 1.8(a))**

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail under 37 CFR 1.8(a) in an envelope addressed to Mail Stop Missing Parts, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date indicated below.

Date: 09-02-04

Elizabeth Kim  
Elizabeth Kim

---

**DECLARATION OF MARK G. LAPPIN FILED  
IN SUPPORT OF PETITION UNDER 37 C.F.R. § 1.47(b)**

I, Mark G. Lappin, to the best of my knowledge and belief, do hereby state as follows:

1. I am a registered patent attorney (Registration No. 26,618) in the Intellectual Property Department of McDermott Will & Emery LLP, acting on behalf of Carl Zeiss AG, who is the current assignee of the above-referenced reissue application ("Reissue Application").
2. Mark Dinsmore is the sole inventor of the Reissue Application.

September 2, 2004  
U.S.S.N. 10/718,506  
Page 2

3. Mark Dinsmore is the sole inventor of U.S. Patent No. 6,320,932B2 ("Underlying Patent"), upon which the Reissue Application is based. The Underlying Patent, in turn, issued from a divisional application based on U.S. Patent No. 6,195,411 ("Parent Patent").

4. Mark Dinsmore is the sole inventor of the Parent Patent.

5. I filed and prosecuted the divisional application that issued in due course as the Underlying Patent ("Underlying Application"). I filed and prosecuted the application that issued in due course as the Parent Patent ("Parent Application").

6. Because Mark Dinsmore 1) is the sole inventor of the Underlying Patent and the Parent Patent, 2) has reviewed the contents of the Underlying Application and the Parent Application, and 3) has signed the application papers for the Underlying Application and the Parent Application, Mark Dinsmore is thoroughly familiar with the subject matter disclosed in the Reissue Application.

7. On or about August 31, 2004, I spoke with Mark Dinsmore, explaining to him the proposed changes in the claims of the Reissue Application, as compared to the claims of the Underlying Patent.

8. The Reissue Application was offered to Mark Dinsmore, and Mark Dinsmore's signature of the Declaration and Power of Attorney for the Reissue Application ("Application Papers") was solicited.

8. Mark Dinsmore expressly stated that he would not sign the Application Papers, thereby effecting a refusal to sign the Application Papers. Mark Dinsmore's express oral refusal to sign occurred on August 31, 2004, in Massachusetts.

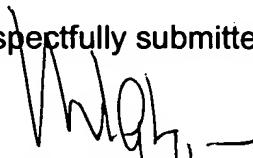
9. Mark Dinsmore stated a reason for his refusal, namely that he was

September 2, 2004  
U.S.S.N. 10/718,506  
Page 2

concerned that signing the Application Papers would limit his future business activities.

10. I declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of any application or patent issued thereon.

Respectfully submitted,

  
\_\_\_\_\_  
Mark G. Lappin  
Registration Number 26,618  
McDERMOTT WILL & EMERY LLP  
28 State Street  
Boston, Massachusetts 02109  
Tel. (617) 535-4043  
Fax: (617) 535-3800

Date: September 2, 2004



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of: Mark Dinsmore

Serial No.: 10/718,506 (which is a reissue application of 6,320,932, issued November 20, 2001)

Filed: November 20, 2003

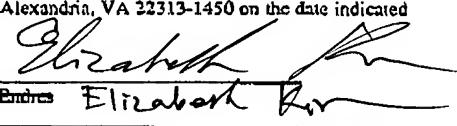
Title: MINIATURE RADIATION SOURCE WITH FLEXIBLE PROBE AND LASER DRIVEN THERMIONIC EMITTER

Attorney Ref.: 56249-140 (PHLL-132DVRE)

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Date: 09-02-04

  
Elizabeth R.  
- Gayle Endres Elizabeth R.

Mail Stop Missing Parts  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**ASSENT OF ASSIGNEE TO REISSUE**

Sir:

The undersigned **Carl Zeiss AG**, with a post address **Carl Zeiss Strass 22, 73447 Oberkochen, Germany**, assignee of the entire interest in the above-mentioned Letters Patent, hereby assents to the accompanying reissue patent application. Attached is a "Statement Under 37 CFR 3.73(b)," establishing the right of the assignee, **Carl Zeiss AG**, to take action in this reissue application. The undersigned is empowered to sign this certificate on behalf of the assignee.

Respectfully submitted,

**CARL ZEISS AG**

Date: September 1, 2004

By:





Printed Name:

I.V. Mikael Gauss Dr. Werner Mueller-  
Rissmann

Title:

authorized Clark authorized Clark



### Statement Under 37 CFR 3.73(b)

Applicant/Patent Owner:

Mark Dinsmore / Carl Zeiss AG

Application No./Patent No.:

10/718,506

Filed:

November 20, 2003

(which is a reissue of 6,320,932)

Issued:

November 20, 2001

Entitled:

MINIATURE RADIATION SOURCE WITH FLEXIBLE PROBE AND LASER  
DRIVEN THERMIONIC Emitter

Carl Zeiss AG

(Name of Assignee)

(Type of Assignee)

certifies that it is the assignee of the entire right, title and interest in the patent application identified above by virtue of either:

A.  An assignment from the inventor(s) of the patent application identified above. The assignment was recorded in the Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

OR

B.  A chain of title from the inventor(s), of the patent application identified above, to the current assignee as shown below:

1. From: \_\_\_\_\_ To: \_\_\_\_\_

The document was recorded in the Patent and Trademark Office at

Reel \_\_\_\_\_ Frame \_\_\_\_\_, or for which thereof is attached.

2. From: \_\_\_\_\_ To: \_\_\_\_\_

The document was recorded in the Patent and Trademark Office at

Reel \_\_\_\_\_ Frame \_\_\_\_\_, or for which thereof is attached.

3. From: \_\_\_\_\_ To: \_\_\_\_\_

The document was recorded in the Patent and Trademark Office at

Reel \_\_\_\_\_ Frame \_\_\_\_\_, or for which thereof is attached.

Additional documents in the chain of title are listed on at.

Copies of assignments or other documents in the chain of title are attached.

The undersigned has reviewed all the documents in the chain of title of the patent application identified above and, to the best of undersigned's knowledge and belief, title is in the assignee identified above.

The undersigned (whose title is supplied below) is empowered to sign this certificate on behalf of the assignee.

BST99 1382694-1.056249.0140

I hereby declare that all statements made herein of my own knowledge are true, and that all statements made on information and belief are believed to be true; and further, that these statements are made with the knowledge that willful false statements, and the like so made, are punishable by fine or imprisonment, or both, under Section 1001, Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Date: September 1, 2004

Name: Dr. H. Gauss Dr. Müller-Bismann

Title: authorized clerk authorized clerk

Telephone Number: +49 7364 20 2841

Signature: i.V. Nikolai Gauss i.V. Müller-Bismann



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of: Mark Dinsmore

Serial No.: 10/718,506 (which is a reissue application of 6,320,932, issued November 20, 2001)

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Date: 09-02-04

  
Elizabeth Kim

---

**STATEMENT EXPLAINING  
CHANGE IN NAME OF ASSIGNEE**

I, Mark G. Lappin, to the best of my knowledge and belief, do hereby state as follows:

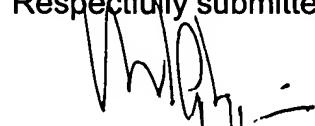
1. I am a registered patent attorney (Registration No. 26,618) in the Intellectual Property Department of McDermott, Will & Emery, acting on behalf of Carl Zeiss AG.

2. The current assignee of the above-referenced reissue application ("Reissue Application"), as shown in assignment document ("Assignment Document") recorded in the United States Patent and Trademark Office at Reel 014981, Frame 0591, is "Carl-Zeiss-Stiftung Doing Business as Carl Zeiss."

3. On July 1, 2004, "Carl-Zeiss-Stiftung Doing Business as Carl Zeiss" changed its legal status to a German stock corporation and concurrently changed its name to "Carl Zeiss AG." Documents showing the name change will be submitted shortly hereafter.

4. I declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of any application or patent issued thereon.

Respectfully submitted,

  
\_\_\_\_\_  
Mark G. Lappin  
Registration Number 26,618  
McDERMOTT, WILL & EMERY LLP  
28 State Street  
Boston, Massachusetts 02109  
Tel.: (617) 535-4043  
Fax: (617) 535-3800

Date: September 2, 2004



RECEIVED  
AUG 20 2004  
KAO  
MW&C

## UNITED STATES PATENT AND TRADEMARK OFFICE

UNDER SECRETARY OF COMMERCE FOR INTELLECTUAL PROPERTY AND  
DIRECTOR OF THE UNITED STATES PATENT AND TRADEMARK OFFICE

AUGUST 14, 2004

PTAS



MARK G. LAPPIN, P.C.  
28 STATE STREET  
BOSTON, MA 02109

\*102673220A\*

### UNITED STATES PATENT AND TRADEMARK OFFICE NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 02/17/2004

REEL/FRAME: 014981/0591  
NUMBER OF PAGES: 44

BRIEF: ASSET PURCHASE AGREEMENT  
DOCKET NUMBER: PHILL-011

ASSIGNOR:  
PHOTOELECTRON CORPORATION

DOC DATE: 06/04/2003

ASSIGNEE:  
CARL-ZEISS-STIFTUNG DOING BUSINESS  
AS CARL ZEISS  
CARL ZEISS STRASSE 22  
OBERKOCHEM, FED REP GERMANY 73447  
PHILL-132DVRE

SERIAL NUMBER: 10718506  
PATENT NUMBER: 50249140  
TITLE: MINIATURE RADIATION SOURCE WITH FLEXIBLE PROBE AND LASER DRIVEN  
THERMIONIC EMITTER

FILING DATE: 11/20/2003  
ISSUE DATE:

PHLL-154

SERIAL NUMBER: 10005290 56249.098 FILING DATE: 12/04/2001  
 PATENT NUMBER: ISSUE DATE:

TITLE: THERAPEUTIC RADIATION SOURCE WITH IN SITU RADIATION DETECTING SYSTEM

SERIAL NUMBER: 10005289 56249.159 FILING DATE: 12/04/2001  
 PATENT NUMBER: 6721392 56249.103 ISSUE DATE: 04/13/2004

TITLE: OPTICALLY DRIVEN THERAPEUTIC RADIATION SOURCE INCLUDING A NON-  
 PLANAR TARGET CONFIGURATION

SERIAL NUMBER: 10133048 56249.147 FILING DATE: 04/26/2002  
 PATENT NUMBER: 6728335 56249.147 ISSUE DATE: 04/27/2004  
 TITLE: CONTROLLER FOR ARRAY OF MINIATURE RADIATION SOURCES

SERIAL NUMBER: 10133079 56249.148 FILING DATE: 04/26/2002  
 PATENT NUMBER: 56249.148 ISSUE DATE:  
 TITLE: METHOD OF TREATING A TUMOR BY PRE-IRRADIATION

SERIAL NUMBER: 10481392 56249.164 FILING DATE:  
 PATENT NUMBER: 56249.164 ISSUE DATE:  
 TITLE: X-RAY SOURCE FOR MATERIALS ANALYSIS SYSTEM

SERIAL NUMBER: 60440454 56249.152 FILING DATE: 01/16/2003  
 PATENT NUMBER: 56249.152 ISSUE DATE:  
 TITLE: X-RAY SOURCE HAVING A THERMALLY MODULATED FIELD EMISSION CATHODE

SERIAL NUMBER: 60440483 56249.153 FILING DATE: 01/16/2003  
 PATENT NUMBER: 56249.153 ISSUE DATE:  
 TITLE: BEAM CURRENT MEASUREMENT TECHNIQUE

SERIAL NUMBER: 07577883 56249.012 FILING DATE: 09/05/1990  
 PATENT NUMBER: 5153900 56249.012 ISSUE DATE: 10/06/1992  
 TITLE: MINIATURIZED LOW POWER X-RAY SOURCE

SERIAL NUMBER: 07955494 56249.019 FILING DATE: 10/02/1992  
 PATENT NUMBER: 5369679 56249.019 ISSUE DATE: 11/29/1994  
 TITLE: LOW POWER X-RAY SOURCE WITH IMPLANTABLE PROBE FOR TREATMENT OF  
 BRAIN TUMORS

SERIAL NUMBER: 08184271 56249.020 FILING DATE: 01/21/1994  
 PATENT NUMBER: 5422926 56249.020 ISSUE DATE: 06/06/1995  
 TITLE: X-RAY SOURCE WITH SHAPED RADIATION PATTERN

SERIAL NUMBER: 08184021 56249.021 FILING DATE: 01/21/1994  
 PATENT NUMBER: 5442678 56249.021 ISSUE DATE: 08/15/1995  
 TITLE: X-RAY SOURCE WITH IMPROVED BEAM STEERING

SERIAL NUMBER: 08104338 56249.024 FILING DATE: 08/09/1993  
 PATENT NUMBER: 5452720 56249.024 ISSUE DATE: 09/26/1995  
 TITLE: METHOD FOR TREATING BRAIN TUMORS

SERIAL NUMBER: 08284841 56249.027 FILING DATE: 08/05/1994  
 PATENT NUMBER: 5528652 56249.027 ISSUE DATE: 06/18/1996  
 TITLE: METHOD FOR TREATING BRAIN TUMORS

PALL-118A

SERIAL NUMBER: 08286757 56249-029      FILING DATE: 08/05/1994  
 PATENT NUMBER: 5511107  
 TITLE: X-RAY PHANTOM APPARATUS

SERIAL NUMBER: 08286285 56249-034      FILING DATE: 08/05/1994  
 PATENT NUMBER: 5623139  
 TITLE: A CCD X-RAY MICRODENSITOMETER SYSTEM

SERIAL NUMBER: 08542066 56249-040      FILING DATE: 10/12/1995  
 PATENT NUMBER: 5635709  
 TITLE: METHOD AND APPARATUS FOR MEASURING RADIATION DOSE DISTRIBUTION

SERIAL NUMBER: 08184296 56249-048      FILING DATE: 01/21/1994  
 PATENT NUMBER: 5428658  
 TITLE: X-RAY SOURCE WITH FLEXIBLE PROBE

SERIAL NUMBER: 08273963 56249-061      FILING DATE: 07/12/1994  
 PATENT NUMBER: 5566221  
 TITLE: APPARATUS FOR APPLYING A PREDETERMINED X-RADIATION FLUX TO AN  
 INTERIOR SURFACE OF A BODY CAVITY

SERIAL NUMBER: 08507845 56249-062      FILING DATE: 07/27/1995  
 PATENT NUMBER: 5621780  
 TITLE: X-RAY APPARATUS FOR APPLYING A PREDETERMINED FLUX TO AN INTERIOR  
 SURFACE OF A BODY CAVITY

SERIAL NUMBER: 08725732 56249-064      FILING DATE: 10/04/1996  
 PATENT NUMBER: 5748699  
 TITLE: APPARATUS FOR APPLYING X-RAYS TO AN INTERIOR SURFACE OF A BODY  
 CAVITY

SERIAL NUMBER: 09502759 56249-085      FILING DATE: 02/11/2000  
 PATENT NUMBER: 6421416  
 TITLE: APPARATUS FOR LOCAL RADIATION THERAPY

SERIAL NUMBER: 09502473 56249-086      FILING DATE: 02/11/2000  
 PATENT NUMBER: 6302581  
 TITLE: SUPPORT SYSTEM FOR A RADIATION TREATMENT APPARATUS

SERIAL NUMBER: 09311792 56249-071      FILING DATE: 05/13/1999  
 PATENT NUMBER: 6195411  
 TITLE: MINIATURE X-RAY SOURCE WITH FLEXIBLE PROBE

SERIAL NUMBER: 09748590 56249-110      FILING DATE: 12/22/2000  
 PATENT NUMBER: 6320932  
 TITLE: MINIATURE RADIATION SOURCE WITH FLEXIBLE PROBE AND LASER DRIVEN  
 THERMIONIC EMITTER

SERIAL NUMBER: 09505413 56249-087      FILING DATE: 02/11/2000  
 PATENT NUMBER: 6285735  
 TITLE: APPARATUS FOR LOCAL RADIATION THERAPY

PHLL-135

SERIAL NUMBER: 09502273  
 PATENT NUMBER: 6301328  
 TITLE: APPARATUS FOR LOCAL RADIATION THERAPY

FILING DATE: 02/11/2000  
 ISSUE DATE: 10/09/2001

SERIAL NUMBER: 09208964  
 PATENT NUMBER: 6245047  
 TITLE: X-RAY PROBE SHEATH APPARATUS

PHLL-142

FILING DATE: 12/10/1998  
 ISSUE DATE: 06/12/2001

SERIAL NUMBER: 09780823  
 PATENT NUMBER: 6480567  
 TITLE: X-RAY PROBE SHEATH APPARATUS

PHLL-142DV  
PHLL-143

FILING DATE: 02/09/2001  
 ISSUE DATE: 11/12/2002

SERIAL NUMBER: 09210045  
 PATENT NUMBER: 6181770  
 TITLE: X-RAY SOURCE INTERLOCK APPARATUS

PHLL-144

FILING DATE: 12/11/1998  
 ISSUE DATE: 01/30/2001

SERIAL NUMBER: 09211144  
 PATENT NUMBER: 6111932  
 TITLE: ELECTRON BEAM MULTISTAGE ACCELERATOR

PHLL-144DV

FILING DATE: 12/14/1998  
 ISSUE DATE: 08/29/2000

SERIAL NUMBER: 09526245  
 PATENT NUMBER: 6198804  
 TITLE: ELECTRON BEAM MULTISTAGE ACCELERATOR

PHLL-155

FILING DATE: 03/15/2000  
 ISSUE DATE: 03/06/2001

SERIAL NUMBER: 09884561  
 PATENT NUMBER: 6480568  
 TITLE: OPTICALLY DRIVEN THERAPEUTIC RADIATION SOURCE

PHLL-157

FILING DATE: 06/19/2001  
 ISSUE DATE: 11/12/2002

SERIAL NUMBER: 09884229  
 PATENT NUMBER: 6493419  
 TITLE: OPTICALLY DRIVEN THERAPEUTIC RADIATION SOURCE HAVING A SPIRAL-SHAPED THERMIONIC CATHODE

PHLL-158

FILING DATE: 06/19/2001  
 ISSUE DATE: 12/10/2002

SERIAL NUMBER: 10175164  
 PATENT NUMBER: 6658086  
 TITLE: OPTICALLY DRIVEN THERAPEUTIC RADIATION SOURCE WITH VOLTAGE GRADIENT CONTROL

PHLL-160

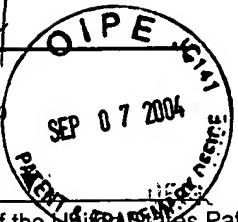
FILING DATE: 06/19/2002  
 ISSUE DATE: 12/02/2003

SERIAL NUMBER: 10133103  
 PATENT NUMBER: 6556651  
 TITLE: ARRAY OF MINIATURE RADIATION SOURCES

PHLL-161

FILING DATE: 04/26/2002  
 ISSUE DATE: 04/29/2003

SERIAL NUMBER: 10005287  
 PATENT NUMBER: 6480573  
 TITLE: THERAPEUTIC RADIATION SOURCE WITH INCREASED CATHODE EFFICIENCY



02-19-2004



Tab settings ➡ ➡ ➡

102673220

Docket No.: PHLL-011 (56249-000)

FEET

U.S. DEPARTMENT OF COMMERCE  
Patent and Trademark Office

To the Director of the United States Patent and Trademark Office: Please record the attached original documents or copy thereof.

1. Name of conveying party(ies): 204 FEB 17 AM 11:03  
Photoelectron Corporation

FINANCE SECTION

Additional names(s) of conveying party(ies)  Yes  No

3. Nature of conveyance:

Assignment  Merger  
 Security Agreement  Change of Name  
 Other Asset Purchase Agreement

Execution Date: June 4, 2003

2. Name and address of receiving party(ies):

Name: Carl-Zeiss-Stiftung doing business as Carl Zeiss

Address: Carl Zeiss Strasse 22

City: Oberkochen State/Prov.: \_\_\_\_\_

Country: Germany ZIP: 73447

Additional name(s) & address(es)  Yes  No

4. Application number(s) or patent numbers(s):

If this document is being filed together with a new application, the execution date of the application is: \_\_\_\_\_

Patent Application No. Filing date

10/718,506 11/20/2003  
10/005,290 12/4/2001  
10/005,289 12/4/2001  
10/133,048 4/26/2002

B. Patent No.(s)

5,153,900 5,452,720 5,635,709  
5,369,679 5,528,652 5,428,658  
5,422,926 5,511,107 5,566,221  
5,442,678 5,623,139 5,621,780

Additional numbers

Yes  No

5. Name and address of party to whom correspondence concerning document should be mailed:

6. Total number of applications and patents involved: 37

Name: Mark G. Lappin, P.C.

Registration No. 26,618

Address: 28 State Street

7. Total fee (37 CFR 3.41): ..... \$ 1,480.00

Enclosed - Any excess or insufficiency should be credited or debited to deposit account

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8. Deposit account number:

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Mark G. Lappin, P.C.

Name of Person Signing

Signature

2/11/04

Date

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S E C T I O N  
P U B L I C R E C O R D S

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Docket No.: PHLL-011 (56249-000)

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Patent and Trademark Office

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To the Director of the United States Patent and Trademark Office: Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):

Photoelectron Corporation

FINANCE SECTION

Additional names(s) of conveying party(ies)  Yes  No

3. Nature of conveyance:

Assignment  Merger

Security Agreement  Change of Name

Other Asset Purchase Agreement

Execution Date: June 4, 2003

4. Application number(s) or patent numbers(s):

If this document is being filed together with a new application, the execution date of the application is: \_\_\_\_\_

Patent Application No. Filing date

10/133,079	4/26/2002
10/481,392	12/19/2003
60/440,454	1/16/2003
60/440,483	1/16/2003

Additional numbers

B. Patent No.(s)

5,748,699	6,320,932	6,480,567
6,421,416	6,285,735	6,181,770
6,302,581	6,301,328	6,111,932
6,195,411	6,245,047	6,198,804

Yes  No

5. Name and address of party to whom correspondence concerning document should be mailed:

6. Total number of applications and patents involved: 37

Name: Mark G. Lappin, P.C.

Registration No. 26,618

Address: 28 State Street

City: Boston State/Prov.: MA

Country: U.S.A. ZIP: 02109

7. Total fee (37 CFR 3.41): .....\$ 1,480.00

Enclosed - Any excess or insufficiency should be credited or debited to deposit account

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8. Deposit account number:

50-1133

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9. Statement and signature.

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Mark G. Lappin, P.C.

Name of Person Signing

Signature

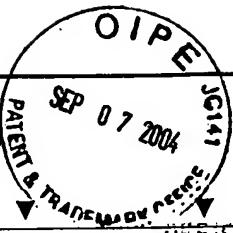
2/11/04

Date

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Director of the United States Patent and Trademark Office  
P.O. Box 1450, Alexandria, VA 22313-1450



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Patent and Trademark Office**PATENTS ONLY**

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1. Name of conveying party(ies): 2004 FEB 17 AM 11:03  
Photoelectron Corporation

FINANCE SECTION

Additional names(s) of conveying party(ies)

 Yes  No

## 3. Nature of conveyance:

Assignment  Merger  
 Security Agreement  Change of Name  
 Other Asset Purchase Agreement

Execution Date: June 4, 2003

## 2. Name and address of receiving party(ies):

Name: Carl-Zeiss-Stiftung doing business as Carl ZeissAddress: Carl Zeiss Strasse 22City: Oberkochen State/Prov.: \_\_\_\_\_Country: Germany ZIP: 73447Additional name(s) & address(es)  Yes  No

## 4. Application number(s) or patent numbers(s):

If this document is being filed together with a new application, the execution date of the application is: \_\_\_\_\_

Patent Application No.

Filing date

## B. Patent No.(s)

6,480,568 6,480,573  
6,493,419  
6,658,086  
6,556,651

Additional numbers

 Yes  No

## 5. Name and address of party to whom correspondence concerning document should be mailed:

6. Total number of applications and patents involved: 37Name: Mark G. Lappin, P.C.Registration No. 26,618Address: 28 State StreetCity: Boston State/Prov.: MACountry: U.S.A. ZIP: 021097. Total fee (37 CFR 3.41): .....\$ 1,480.00 Enclosed - Any excess or insufficiency should be credited or debited to deposit account Authorized to be charged to deposit account

## 8. Deposit account number:

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Name of Person Signing

Signature

2/11/04

Date

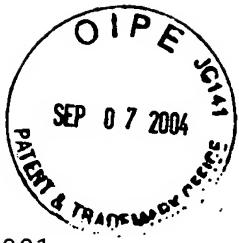
Total number of pages including cover sheet, attachments, and

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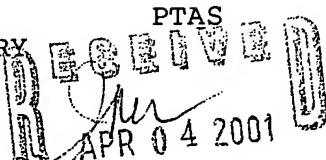
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Patent and Trademark Office  
ASSISTANT SECRETARY AND COMMISSIONER  
OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

MARCH 30, 2001

MCDERMOTT, WILL & EMERY  
MARK G. LAPPIN  
28 STATE STREET  
BOSTON MA 02109



MW&E

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RECORDATION DATE: 01/05/2001

REEL/FRAME: 011438/0583  
NUMBER OF PAGES: 3

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:  
DINSMORE, MARK

DOC DATE: 01/02/2001

ASSIGNEE:  
PHOTOELECTRON CORPORATION  
5 FORBES ROAD-SUITE 2  
LEXINGTON, MASSACHUSETTS 02421

SERIAL NUMBER: 09311792  
PATENT NUMBER: 6195411

FILING DATE: 05/13/1999  
ISSUE DATE: 02/27/2001

SONYA JOHNSON, EXAMINER  
ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS



01-23-2001

ocket No.: PHLL-132



U.S. DEPARTMENT OF COMMERCE  
Patent and Trademark Office

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101591129

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):  
Mark Dinsmore

1.5.01

2. Name and address of receiving party(ies):

Name: Photoelectron Corporation

Internal Address: \_\_\_\_\_

3. Nature of conveyance:

Assignment       Merger  
 Security Agreement       Change of Name  
 Other \_\_\_\_\_

Street Address: 5 Forbes Road - Suite 2

City: Lexington      State: MA ZIP: 02421

Execution Date: January 2, 2001

Additional name(s) & address(es) attached?  Yes  No

4. Application number(s) or registration numbers(s):

If this document is being filed together with a new application, the execution date of the application is: \_\_\_\_\_

A. Patent Application No.(s)

09/311,792

B. Patent No.(s)

Additional numbers attached?  Yes  No

5. Name and address of party to whom correspondence concerning document should be mailed:

6. Total number of applications and patents involved: 1

Name: Mark G. Lappin

7. Total fee (37 CFR 3.41): ..... \$ 40.00

Internal Address: McDermott, Will & Emery

Enclosed - Any excess or insufficiency should be credited or debited to deposit account

Authorized to be charged to deposit account

Street Address: 28 State Street

8. Deposit account number:

50-1133

City: Boston      State: MA ZIP: 02109

01/19/2001 DNGUYEN 00000096 09311792

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9. Statement and signature.

*To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.*

Mark G. Lappin

January 2, 2001

Name of Person Signing

Signature

Total number of pages including cover sheet, attachments, and document: 3

Date

DOCKET NO. PHLL-132

**ASSIGNMENT OF PATENT RIGHTS**

I, Mark Dinsmore, of 85 Horse Pond Road, Sudbury, Massachusetts 01776 in consideration of One Dollar and other valuable consideration paid to me by

**Photoelectron Corporation**

a corporation of Massachusetts, having its principal place of business at 5 Forbes Road, Suite 2, Lexington, Massachusetts 02421-7305, the receipt of which is hereby acknowledged, do hereby sell, assign and transfer unto said

**Photoelectron Corporation**

its successors and assigns, my entire interest for the United States of America and all foreign countries including all rights of priority under the International Convention for the Protection of Industrial Property in a certain invention or improvement in

**MINIATURE X-RAY SOURCE WITH FLEXIBLE PROBE**

described in an application for Letters Patent of the United States, Serial Number 09/311,792, filed on May 13, 1999, and in all Letters Patent of the United States and all foreign countries which may or shall be granted on said invention, or any parts thereof, or on said application, or any divisional, continuing, reissue or other applications based in whole or in part thereon. And I agree, for myself and my executors and administrators, with said corporation and its successors and assigns but at its or their expense and charges, hereafter to execute all applications, amended specifications, deed or other instrument, and to do all acts necessary or proper to secure the grant of Letters Patent in the United States and in all other countries to said corporation, with specifications and claims in such form as shall be approved by the counsel of said corporation and to vest and confirm in said corporation, its successors and assigns, the legal title to all such patents.

And I do hereby authorize and request the Commissioner of Patents and Trademarks of the United States to issue such Letters Patent as shall be granted upon said application or applications based thereon to said corporation, its successors and assigns.

WITNESS my hand and seal this 2nd day of January, 2000, 2001 <sup>MD</sup>

By: 

Mark Dinsmore

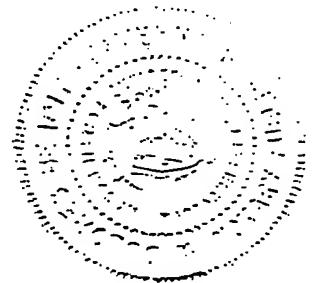
State of Massachusetts )  
                                  )  
                                  ss  
County of Middlesex      )

Then personally appeared the above named Mark Dinsmore and acknowledged the foregoing <sup>DBT</sup> instrument to be his free act and deed, before me, this day of Jan. 2nd, 2000, 2001

Dolores Benoit-Tavera  
Notary Public

My commission expires:

Dolores Benoit-Tavera  
NOTARY PUBLIC  
My commission expires May 14, 2004.





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UNDER SECRETARY OF COMMERCE FOR INTELLECTUAL PROPERTY AND  
DIRECTOR OF THE UNITED STATES PATENT AND TRADEMARK OFFICE

AUGUST 14, 2004

PTAS



MARK G. LAPPIN, P.C.  
28 STATE STREET  
BOSTON, MA 02109

\*102673220A\*

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RECORDATION DATE: 02/17/2004

REEL/FRAME: 014981/0591  
NUMBER OF PAGES: 44

BRIEF: ASSET PURCHASE AGREEMENT  
DOCKET NUMBER: PHILL-011

ASSIGNOR:  
PHOTOELECTRON CORPORATION

DOC DATE: 06/04/2003

ASSIGNEE:  
CARL-ZEISS-STIFTUNG DOING BUSINESS  
AS CARL ZEISS  
CARL ZEISS STRASSE 22  
OBERKOCHEM, FED REP GERMANY 73447

FILING DATE: 11/20/2003  
ISSUE DATE:  
S 0249140  
PHILL-132DVRE

SERIAL NUMBER: 10718506  
PATENT NUMBER: 50249140  
TITLE: MINIATURE RADIATION SOURCE WITH FLEXIBLE PROBE AND LASER DRIVEN THERMIONIC EMITTER